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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,806	08/25/2003	Rainer Gadow	4965-000159	2344

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EXAMINER

PAIK, SANG YEOP

ART UNIT PAPER NUMBER

3742

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/647,806	Applicant(s) GADOW ET AL.	
	Examiner Sang Y Paik	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 4, 5, 9-13, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Martin et al (US 3,978,315).

Martin et al show a ceramic cooktop with a cooktop (1) made of glass ceramic, an intermediate electrically conductive layer (2) made of a cermet material having a metal matrix of cobalt and a ceramic material including ceramic oxides, an insulating layer (3) made of cordierite, and a heat conductor layer (4). Martin et al further show that the glass coating on the ceramic glass and the conductive layer are provided utilizing the known methods which would include spraying.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al (US 3,978,315) in view of Alexander (US 3,110,571) or Flaitz et al (US 4,764,341).

Martin et al shows the ceramic cooktop claimed except a ceramic bonding layer.

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Alexander shows a ceramic bonding layer to bond a ceramic to a metal. Flaitz et al also shows a ceramic bonding layer to bond a ceramic substrate to a metallic layer. In view of Alexander or Flaitz et al, it would have been obvious to one of ordinary skill in the art to adapt Martin et al with a ceramic bonding layer to provide a ceramic bonding layer between a ceramic substrate and a metallic layer such as the cermet material to more securely bond such layers.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al in view of Alexander or Flaitz et al as applied to claims 1 and 3 above, and further in view of Strange (US 5,728,638):

Martin et al in view of Alexander or Flaitz et al shows the ceramic cooktop claimed except the intermediate layer is made titanium oxide.

Strange shows a cermet material having titanium oxide (titania). Strange shows that the cermet material provides a mechanically strong material with corrosion and wear resistance properties. In view of Strange, it would have been obvious to one of ordinary skill in the art to adapt Martin et al, as modified by Alexander or Flaitz et al, with the intermediate layer made with titania to provide a mechanically strong material that also has corrosion and wear resistance properties.

6. Claims 6-8 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al (US 3,978,315) in view of Strange et al (US 5,728,638) or Rousset et al (US 5,462,903) or Howard et al (US 5,227,345).

Martin et al show the ceramic cooktop claimed except providing the cermet material containing a metal matrix of nickel, cobalt and chromium and the carbide particles such as tungsten carbides or chromium carbides.

Strange et al show a cermet material including the metal matrix of nickel, chromium and cobalt and the ceramic oxides such as silica or alumina along with the oxide or carbide form of chromium. Strange et al also show that tungsten is included in the cermet material.

Rousset et al also show a cermet material including the metal matrix of nickel, chromium and cobalt and the ceramic oxides such as alumina. Rousset et al teach that such a composite cermet material produces a mechanical and thermal resistance when exposed to a high temperature.

Howard et al also show a cermet material including the metal matrix of nickel, chromium and cobalt with the ceramic materials in that are in the form of oxides, nitrides or carbides. Howard et al further show it is known in the art that tungsten carbide and chromium carbides are used with cobalt or nickel to make a cermet material.

In view of Strange et al, Rousset et al or Howard et al, it would have been obvious to one of ordinary skill in the art to adapt the intermediate layer of Martin et al with the cermet material nickel, cobalt and chromium with chromium carbide or tungsten carbide to improve the corrosion or wear resistance when exposed to a high temperature.

#### ***Response to Arguments***

7. Applicant's arguments filed 8/27/04 have been fully considered but they are not persuasive.

The applicant argues that the applied prior art does not teach the thermal spraying by which the ceramic bonding layer is formed or coated on the cooking plate. It is noted to the applicant that the claims that are pending in this application relate to an apparatus, and it is further noted that the determination of the patentability of an apparatus is based on the product

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itself and not on its method or process. Furthermore, the applied reference Martin et al teach that the coating or printing of a material can be done by means of spraying or any other conventional techniques. Marin et al allow one of ordinary skill in the art to employ various coating techniques to produce the coated or printed layer. The applicant states that the thermal spraying which produces a high impact velocity and heat leads to better mechanical adhesion. However, there is no structural difference that would distinguish the prior art structure from the claimed structure. Furthermore, the applicant has not stated how the thermal spraying process would be different from the spraying method disclosed by Martin et al. With respect to other applied prior art, it is noted to the applicant that they are not applied to teach the thermal spraying method but to further supplement or modify the structures of Martin et al to meet the claimed structure of the applicant's apparatus.

Thus, the applicant's arguments are not deemed persuasive.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

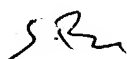
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Y Paik whose telephone number is 571-272-4783. The examiner can normally be reached on M-F (9:00-4:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 517-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sang Y Paik  
Primary Examiner  
Art Unit 3742

syp